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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/6 4/2
12811A LANCE MISSILE NUMBER 2200, ROUND NUMBER 293 RCL (13 JANU--ETC(U)
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METEOROLOGICAL DATA REPORT

12811A LANCE
MISSILE NO. 2200, ROUND NO. 293 RCL
(13 January 1977)

BY

WSMR METEOROLOGICAL TEAM

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12811A Lance, Missile Number 2200, Round Number 293 RCL, are presented in tabular form.		

400844

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INTRODUCTION

12811A Lance, Missile Number 2200, Round Number 293 RCL, was launched from Don Site, White Sands Missile Range (WSMR), New Mexico, at 0851 HRS MST, 13 January 1977. The scheduled launch time was 0815 HRS MST.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,997.0	FEET/MSL
PRESSURE	879.0	MBS
TEMPERATURE	-1.4	°C
RELATIVE HUMIDITY	93	%
DEW POINT	-2.4	°C
DENSITY	1,124.0	GM/M ³
WIND SPEED	04	MPH
WIND DIRECTION	120	DEGREES
CLOUD COVER	10	FOG

TABLE I. SURFACE OBSERVATIONS TAKEN AT DON SITE, 0854 HRS MST/13 JANUARY 1977.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-0.30	3.5	116
-0.20	3.5	119
-0.10	4.0	122
00.00	4.0	132

TABLE II. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1
12811A LANCE, MISSILE NO. 2200, ROUND NO. 293 RCL
LAUNCHED FROM DON SITE, 0854 MST/13 JANUARY 1977

WSTM COORDINATES: X = 512,027.48 Y = 247,400.25 Z = 3,997.64

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	MISSING	DATA
100		
200		
300		
400		
500		
600	MISSING	DATA
700	360	3.0
800	083	1.5
900	287	1.0
1000	243	0.5
1100	298	2.0
1200	275	4.5
1300	236	0.5
1400	090	2.0
1500	325	2.0
1600	358	3.5
1700	336	6.5
1800	307	7.0
1900	305	9.0
2000	299	11.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	302	9.0
2200	285	5.5
2300	302	9.0
2400	291	10.5
2500	316	9.5
2600	341	12.0
2700	321	11.5
2800	328	11.5
2900	320	12.5
3000	323	13.0
3100	324	13.5
3200	329	13.5
3300	323	11.5
3400	342	9.0
3500	341	6.5
3600	331	9.5
3700	327	11.0
3800	312	14.0
3900	303	15.0
4000	313	11.5
4100	331	14.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM DON SITE, AT 0835 MST/13 JANUARY 1977
12811A LANCE, MISSILE NO. 2200, ROUND NO. 293 RCL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 511,988.37 Y = 247,396.36 Z = 3,996.83

APPROXIMATELY: 1/4 MILE EAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	311	13.5
4300	312	14.5
4400	302	16.5
4500	296	15.0
4600	308	14.5
4700	302	15.0
4800	303	15.5
4900	303	15.5
5000	306	16.0
5100	312	17.0
5200	307	17.0
5300	306	15.5
5400	296	15.0
5500	290	18.0
5600	294	14.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	302	15.5
5800	292	15.5
5900	301	17.5
6000	292	16.0
6100	079	17.5
6200	284	18.5
6300	284	17.5
6400	296	20.5
6500	292	18.0
6600	270	20.5
6700	278	24.5
6800	283	27.0
6900	284	25.5
7000	275	22.0

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR		CALM
500	355	1.0
1000	355	3.0
1500	335	4.0
2000	320	7.0
2500	310	9.0
3000		11.0
3500		12.0
4000		12.0
4500	310	12.0
5000	305	12.0
5500	295	11.0
6000	280	12.0
6500	270	13.0
7000	265	16.0
7500	260	20.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM NW-50, AT 0835 MST/13 JANUARY 1977
12811A LANCE, MISSILE NO. 2200, ROUND NO. 293 RCL

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR		CALM
100	360	0.5
200	319	2.0
300	317	4.0
400	045	0.5
500	108	2.5
600	113	1.5
700	310	4.0
800	304	4.5
900	308	4.0
1000	297	3.0
1100	293	3.5
1200	290	4.0
1300	286	5.0
1400	282	5.5
1500	278	6.0
1600	275	7.0
1700	271	7.5
1800	267	8.0
1900	263	8.5
2000	260	9.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	256	10.0
2200	307	7.5
2300	312	8.5
2400	311	8.5
2500	313	9.5
2600	324	10.0
2700	326	10.5
2800	325	10.5
2900	321	10.5
3000	323	11.0
3100	322	10.5
3200	320	11.0
3300	318	11.0
3400	316	10.5
3500	320	11.0
3600	341	10.0
3700	324	10.5
3800	323	12.5
3900	315	14.5
4000	316	13.0
4100	311	14.0

TABLE V. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM DON SITE, AT 0852 MST/13 JANUARY 1977
12811A LANCE, MISSILE NO. 2200, ROUND NO. 293 RCL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 511,988.37 Y = 247,396.36 Z = 3,996.83

APPROXIMATELY: 1/4 MILE EAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	313	13.0	6600	289	20.5
4300	310	14.0	6700	283	23.0
4400	310	3.5	6800	281	22.5
4500	309	13.0	6900	283	24.5
4600	306	13.0	7000	279	24.5
4700	311	12.0	7100	278	24.5
4800	308	14.0	7200	276	25.0
4900	312	14.0	7300	272	26.0
5000	309	14.0	7400	271	24.5
5100	306	14.5	7500	269	23.5
5200	305	15.5	7600	270	25.0
5300	301	15.5	7700	268	26.0
5400	304	15.5	7800	268	27.0
5500	305	16.5	7900	266	28.5
5600	304	16.0	8000	263	30.0
5700	300	15.5	8100	265	31.5
5800	304	16.0	8200	261	29.5
5900	305	17.0	8300	262	30.0
6000	298	16.5	8400	265	27.5
6100	297	17.0	8500	259	28.0
6200	296	16.0	8600	253	28.5
6300	294	18.0	8700	259	27.0
6400	294	20.0	8800	257	31.5
6500	293	20.5	8900	259	32.0

TABLE V. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	259	31.0
9100	248	35.0
9200	250	34.0
9300	249	36.5
9400	246	34.0
9500	245	35.0
9600	243	32.5
9700	242	34.5
9800	241	33.5
9900	241	33.0
10000	239	34.0
10100	239	35.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10200	239	35.0
10300	240	35.0
10400	240	35.0
10500	241	34.5
10600	238	32.0
10700	232	33.0
10800	244	31.5
10900	241	32.0
11000	243	32.0
11100	252	32.0
11200	248	33.0
11300	241	33.0

TABLE V. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4126.59 FEET MSL
13 JAN. 77
ASCENSION NO. 25

STATION ALTITUDE 4126.59 FEET MSL
0755 HRS MST
0130010025
HOLLISMAN
TABLE VI

STATION ALTITUDE 4126.59 FEET MSL
13 JAN. 77
ASCENSION NO. 25

WSIM SITE COORDINATES
571739.24 FEET E
362745.21 FEET N

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
874.2	4126.6	-7.7	-8.8	92.0
863.7	4437.0	-5.2	-5.3	99.0
853.8	4737.6	-1.1	-2.2	99.0
852.0	4855.1	.4	.3	99.0
826.2	5606.0	1.9	-6.2	55.0
795.0	6627.4	2.7	-10.5	37.0
712.8	9489.8	-4.3	-16.4	28.0
702.0	9958.3	-5.0	-14.5	47.0
673.0	10969.8	-7.4	-15.5	52.0
660.0	11433.6	-7.8	-34.0	10.0
642.5	12152.9	-9.3	-22.9	22.0
625.0	12844.2	-10.7	-14.1	76.0
613.7	13312.9	-12.3	-16.1	73.0
604.7	13683.0	-12.8	-18.7	61.0
581.6	14656.3	-15.1	-21.5	58.0
564.5	15392.1	-16.1	-40.6	10.0
500.0	18363.6	-22.2	-45.4	10.0
407.0	27625.3	-34.4	-50.8	17.0
300.0	50115.4	-43.6		
250.0	34040.4	-50.4		
222.4	36590.0	-52.8		
212.2	37589.1	-52.3		
200.0	38844.1	-54.0		
177.8	41342.7	-51.5		
173.8	41828.6	-52.5		
157.5	43925.0	-50.0		
150.0	44989.0	-50.3		
138.9	46650.0	-52.6		
122.1	49314.3	-54.8		
117.0	50949.4	-58.2		

STATION ALTITUDE 4126.59 FEET MSL
 13 JAN. 77 0755 HRS MST
 ASCENSION NO. 25

SIGNIFICANT LEVEL DATA

0130010005
 HOLLDMAN

TABLE VI (CONT)

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
109.8	51582.9	-58.0		
100.0	53505.7	-62.5		
85.7	56681.9	-70.3		
78.0	58479.8	-69.4		
70.0	60595.2	-64.0		
66.6	61606.7	-61.3		
56.2	65076.6	-62.3		
50.0	67474.2	-59.9		
41.6	71300.1	-56.4		
41.2	71504.6	-52.4		
33.8	75713.5	-54.6		
30.0	78243.7	-53.5		
20.0	86941.8	-49.8		
16.8	90728.3	-48.4		

STATION ALTITUDE 4126.59 FEET MSL
 13 JAN. 77 0755 HRS MST
 ASCENSION NO. 35

UPPER AIR DATA
 0130010025
 HOLLOWMAN

WSH SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE VII

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY CM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
4126.6	874.2	-7.7	-8.9	92.0	1145.7	635.2	145.0	145.0	4.1	1.000272
4500.0	861.6	-4.1	-4.7	99.0	1113.6	639.6	129.4	129.4	1.6	1.000271
5000.0	845.4	.7	-7	90.5	1072.6	645.5	354.9	354.9	2.1	1.000268
5500.0	829.5	1.7	-5.0	51.2	1049.4	646.5	342.4	342.4	5.4	1.000255
6000.0	814.0	2.2	-7.6	48.1	1028.7	647.0	334.4	334.4	7.9	1.000246
6500.0	798.8	2.5	-9.9	39.2	1007.8	647.4	323.3	323.3	9.4	1.000239
7000.0	783.8	1.8	-11.3	37.1	991.9	646.4	315.0	315.0	11.1	1.000234
7500.0	769.0	.6	-12.3	37.3	977.6	644.9	308.9	308.9	13.1	1.000230
8000.0	754.5	-7	-13.2	37.5	963.5	643.4	298.9	298.9	14.9	1.000226
8500.0	740.2	-1.9	-14.4	37.7	949.6	642.0	307.9	307.9	16.6	1.000222
9000.0	726.2	-3.1	-15.4	37.8	936.0	640.5	304.3	304.3	18.1	1.000218
9500.0	712.5	-4.3	-16.4	38.2	922.5	639.0	299.4	299.4	19.3	1.000214
10000.0	698.9	-5.1	-14.6	47.2	907.7	638.2	293.6	293.6	20.5	1.000213
10500.0	685.4	-6.3	-15.1	47.7	893.8	636.7	286.7	286.7	22.1	1.000209
11000.0	672.2	-7.4	-16.2	45.3	880.4	635.4	280.5	280.5	24.1	1.000205
11500.0	658.7	-7.9	-32.2	32.0	865.7	634.5	271.5	271.5	27.3	1.000195
12000.0	646.4	-9.0	-24.4	27.3	852.0	633.3	264.4	264.4	30.8	1.000194
12500.0	633.8	-10.0	-17.5	54.1	838.2	632.3	258.3	258.3	33.1	1.000195
13000.0	621.4	-11.2	-14.8	75.0	825.5	630.9	253.2	253.2	35.1	1.000195
13500.0	609.1	-12.6	-17.4	56.9	813.5	629.2	249.1	249.1	35.8	1.000190
14000.0	597.1	-13.5	-19.6	60.0	800.6	626.0	245.9	245.9	36.4	1.000186
14500.0	585.3	-14.7	-21.0	58.5	788.4	626.5	244.1	244.1	36.8	1.000182
15000.0	573.6	-15.6	-27.3	35.6	775.4	625.4	243.7	243.7	36.8	1.000176
15500.0	562.1	-16.3	-40.7	10.0	762.4	624.4	245.3	245.3	36.1	1.000171
16000.0	550.7	-17.3	-41.5	10.0	749.9	623.1	246.6	246.6	36.4	1.000168
16500.0	539.6	-18.4	-42.4	10.0	737.7	621.9	247.4	247.4	37.5	1.000165
17000.0	528.7	-19.4	-43.2	10.0	725.7	620.6	247.5	247.5	39.8	1.000162
17500.0	518.0	-20.4	-44.0	10.0	713.9	619.3	247.1	247.1	42.8	1.000160
18000.0	507.5	-21.5	-44.8	10.0	702.2	618.1	247.3	247.3	45.6	1.000157
18500.0	497.1	-22.5	-45.5	10.2	690.9	616.8	247.5	247.5	48.3	1.000155

UPPER AIR DATA
 0120010025
 HOLLANDAN
 WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

STATION ALTITUDE 4126.59 FEET MSL
 13 JAN. 77 0755 HRS MST
 ASCENSION NO. 25
 TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND MNTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNTS	INDEX OF REFRACTION
19000.0	486.7	-23.7	-45.8	10.8	679.5	615.4	244.9	49.0	1.000152
19500.0	478.5	-24.8	-46.2	11.5	668.4	613.9	242.3	49.7	1.000149
20000.0	466.5	-26.0	-46.7	12.2	657.5	612.5	239.4	49.9	1.000147
20500.0	456.7	-27.2	-47.2	12.8	646.7	611.0	236.8	50.3	1.000145
21000.0	447.1	-28.3	-47.7	13.5	636.1	609.6	234.8	50.7	1.000142
21500.0	437.7	-29.5	-48.2	14.2	625.7	608.2	232.7	51.5	1.000140
22000.0	428.5	-30.5	-48.8	14.8	615.5	606.7	230.4	52.6	1.000138
22500.0	419.6	-31.8	-49.4	15.5	605.5	605.3	228.7	53.8	1.000135
23000.0	410.7	-33.0	-50.0	16.2	595.7	603.8	227.4	55.1	1.000133
23500.0	402.1	-34.1	-50.6	16.8	586.0	602.3	226.5	55.2	1.000131
24000.0	393.4	-34.9	-51.7	16.0**	575.3	601.3	225.7	55.0	1.000128
24500.0	384.8	-35.6	-53.0	14.7**	564.4	600.4	226.0	53.8	1.000126
25000.0	376.4	-36.3	-54.4	13.4**	553.6	599.5	226.3	52.8	1.000124
25500.0	368.1	-37.1	-55.8	12.1**	543.1	598.6	225.7	53.0	1.000121
26000.0	360.0	-37.8	-57.3	10.8**	532.8	597.7	224.4	52.1	1.000119
26500.0	352.1	-38.5	-58.9	9.5**	522.7	596.8	221.5	49.0	1.000117
27000.0	344.4	-39.2	-60.6	8.2**	512.8	595.9	221.0	46.7	1.000114
27500.0	336.9	-39.9	-62.5	6.9**	503.1	595.0	224.5	45.7	1.000112
28000.0	329.5	-40.6	-64.6	5.5**	493.6	594.1	229.1	45.6	1.000110
28500.0	322.3	-41.3	-67.1	4.2**	484.2	593.2	234.7	46.5	1.000108
29000.0	315.2	-42.0	-70.2	2.9**	475.1	592.3	238.8	46.0	1.000106
29500.0	308.3	-42.7	-74.6	1.6**	466.1	591.4	241.2	42.7	1.000104
30000.0	301.5	-43.4	-85.2	.3**	457.3	590.5	244.0	40.0	1.000102
30500.0	294.8	-44.3			448.6	589.4	247.0	38.7	1.000100
31000.0	288.1	-45.1			440.1	588.3	249.9	37.7	1.000098
31500.0	281.5	-46.0			431.7	587.2	251.3	38.1	1.000096
32000.0	275.2	-46.8			423.5	586.1	252.6	38.6	1.000094
32500.0	268.9	-47.7			415.5	585.0	252.0	39.9	1.000093
33000.0	262.8	-48.5			407.6	583.9	251.5	41.1	1.000091
33500.0	256.9	-49.4			399.9	582.8	252.7	40.6	1.000089

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4125.59 FEET MSL
13 JAN. 77 0755 HRS MST
ASCENSION NO. 25

UPPER AIR DATA
C130010025
40110MAN
TABLE VII (CONT)

WSTM SITE COORDINATES
571739.24 FEET E
362745.21 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
34000.0	251.0	-50.2		392.3	581.6	254.2	39.9	1.000037
34500.0	245.3	-50.8		384.2	580.9	254.6	41.0	1.00008f
35000.0	239.6	-51.3		376.2	580.3	254.6	43.4	1.000084
35500.0	234.0	-51.8		368.3	579.7	254.2	46.1	1.000082
36000.0	228.6	-52.2		360.5	579.0	252.8	49.8	1.000080
36500.0	223.3	-52.7		353.0	578.4	251.7	53.5	1.000079
37000.0	218.2	-52.6		344.6	578.6	251.3	55.8	1.000077
37500.0	213.1	-52.3		336.2	578.9	251.1	57.5	1.000075
38000.0	208.1	-53.1		329.4	578.0	251.1	58.5	1.000073
38500.0	203.3	-54.0		323.1	576.8	251.3	58.6	1.000072
39000.0	198.5	-54.4		316.2	576.2	251.4	58.2	1.000070
39500.0	193.9	-53.8		308.0	577.0	251.3	56.5	1.000069
40000.0	189.4	-53.2		299.9	577.8	250.5	56.0	1.000067
40500.0	185.0	-52.5		292.1	578.6	248.3	58.0	1.000065
41000.0	180.7	-51.9		284.5	579.4	245.2	62.6	1.000063
41500.0	176.5	-51.8		277.7	579.7	244.4	69.5	1.000062
42000.0	172.4	-52.1		271.7	579.2	244.2	74.3	1.000061
42500.0	168.4	-51.6		264.9	579.9	244.5	78.2	1.000059
43000.0	164.6	-51.0		258.1	580.6	245.3	81.2	1.000057
43500.0	160.8	-50.5		251.5	581.4	245.5	83.6	1.000056
44000.0	157.1	-50.0		245.2	581.9	247.9	86.0	1.000055
44500.0	153.4	-50.2		239.7	581.7	249.8	88.5	1.000053
45000.0	149.9	-50.3		234.4	581.5	251.7	90.9	1.000052
45500.0	146.5	-51.0		229.7	580.6	254.1	90.5	1.000051
46000.0	143.1	-51.7		225.1	579.7	250.6	90.3	1.000050
46500.0	139.8	-52.4		220.6	578.8	258.9	87.6	1.000049
47000.0	136.5	-52.9		215.9	578.2	261.4	84.8	1.000048
47500.0	133.3	-53.3		211.3	577.6	263.5	79.0	1.000047
48000.0	130.2	-53.7		206.8	577.1	265.9	72.8	1.000046
48500.0	127.2	-54.1		202.3	576.6	267.4	67.3	1.000045

STATION ALTITUDE 4125.59 FEET MSL
 13 JAN. 77 0755 HRS MST
 ASCENSION NO. 75

UPPER AIR DATA
 C130CIC025
 HOLLIPAN

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DENPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
49000.0	124.2	-54.5			198.0	576.0	268.3	62.3	1.000044
49500.0	121.3	-55.2			193.0	575.2	268.3	59.1	1.000043
50000.0	118.5	-56.2			190.2	573.8	266.4	58.8	1.000042
50500.0	115.7	-57.3			186.6	572.4	264.5	58.7	1.000042
51000.0	112.9	-58.2			183.0	571.2	262.7	57.2	1.000041
51500.0	110.2	-58.0			178.5	571.4	262.1	55.5	1.000040
52000.0	107.6	-59.0			175.0	570.1	260.8	53.8	1.000039
52500.0	105.0	-60.1			171.7	568.6	260.0	49.8	1.000038
53000.0	102.5	-61.3			168.5	567.0	259.1	45.8	1.000038
53500.0	100.0	-62.5			165.4	565.4	257.3	42.6	1.000037
54000.0	97.6	-63.7			162.3	563.8	254.1	40.7	1.000036
54500.0	95.1	-64.9			159.2	562.1	250.8	39.2	1.000035
55000.0	92.8	-66.2			156.2	560.5	248.8	39.7	1.000035
55500.0	90.5	-67.4			153.2	558.8	246.8	40.3	1.000034
56000.0	88.3	-68.6			150.3	557.1	247.6	40.4	1.000033
56500.0	86.1	-69.9			147.5	555.5	249.3	40.4	1.000033
57000.0	83.9	-70.1			144.0	555.1	251.3	40.4	1.000032
57500.0	81.8	-69.9			140.2	555.4	253.9	40.4	1.000031
58000.0	79.8	-69.6			136.5	555.8	256.5	40.5	1.000030
58500.0	77.8	-69.3			132.9	556.3	258.1	39.9	1.000030
59000.0	75.8	-68.2			128.9	557.7	259.7	39.2	1.000029
59500.0	74.0	-67.1			125.1	559.2	260.2	37.8	1.000028
60000.0	72.1	-66.1			121.3	560.6	260.0	35.7	1.000027
60500.0	70.3	-65.0			117.7	562.1	259.3	33.7	1.000026
61000.0	68.6	-63.4			114.0	564.2	257.4	32.0	1.000025
61500.0	67.0	-61.7			110.3	566.5	255.2	30.3	1.000025
62000.0	55.3	-61.4			107.5	566.9	253.9	29.2	1.000024
62500.0	63.8	-61.6			105.0	566.7	252.5	28.1	1.000023
63000.0	62.2	-61.7			102.5	566.5	250.8	27.1	1.000023
63500.0	60.7	-61.8			100.1	566.3	248.9	26.2	1.000022

UPPER AIR DATA
 0120010025
 HOLLAMAN

STATION ALTITUDE 4126.59 FEET MSL
 13 JAN. 77 0755 HRS MST
 ASCENSION NO. 25

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND MNTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREE				DIRECTION DEGREES(TN)	SPEED KNOTS	
64000.0	59.2	-62.0		97.7	556.1		247.4	25.4	1.000022
64500.0	57.8	-62.1		95.4	565.9		247.4	24.5	1.000021
65000.0	56.4	-62.3		97.7	565.7		247.3	23.5	1.000021
65500.0	55.1	-61.9		90.8	566.3		251.3	22.6	1.000020
66000.0	53.7	-61.4		88.4	566.9		256.3	21.8	1.000020
66500.0	52.4	-60.9		86.0	567.6		260.7	21.3	1.000019
67000.0	51.2	-60.4		83.8	568.3		264.4	21.0	1.000019
67500.0	49.9	-59.9		81.6	568.9		267.8	20.9	1.000018
68000.0	48.8	-59.4		79.5	569.5		268.4	20.7	1.000018
68500.0	47.6	-59.0		77.4	570.2		269.0	20.5	1.000017
69000.0	46.5	-58.5		75.4	570.8		269.6	20.2	1.000017
69500.0	45.4	-58.0		73.5	571.4		270.1	19.9	1.000016
70000.0	44.3	-57.6		71.6	572.0		270.1	19.4	1.000016
70500.0	43.2	-57.1		69.7	572.6		265.3	18.5	1.000015
71000.0	42.2	-56.7		67.9	573.2		260.0	17.8	1.000015
71500.0	41.2	-52.5		65.1	578.7		253.2	16.8	1.000014
72000.0	40.3	-52.7		63.6	578.5		244.7	15.9	1.000014
72500.0	39.3	-52.9		62.2	578.1		236.0	15.4	1.000014
73000.0	38.4	-53.2		60.8	577.8		233.9	14.2	1.000014
73500.0	37.5	-53.4		59.5	577.5		231.5	13.1	1.000013
74000.0	36.6	-53.7		58.2	577.1		229.7	12.0	1.000013
74500.0	35.8	-54.0		56.9	576.8		228.8	10.9	1.000013
75000.0	35.0	-54.2		55.6	576.4		227.6	9.9	1.000012
75500.0	34.1	-54.5		54.4	576.1		219.8	8.8	1.000012
76000.0	33.3	-54.5		53.1	576.1		209.3	8.0	1.000012
76500.0	32.6	-54.3		51.8	576.4		196.4	7.7	1.000012
77000.0	31.8	-54.0		50.6	576.7		182.0	8.5	1.000011
77500.0	31.1	-53.8		49.3	577.0		170.5	9.7	1.000011
78000.0	30.3	-53.6		48.2	577.2		164.8	10.6	1.000011
78500.0	29.6	-53.4		47.0	577.5		162.7	10.9	1.000010

UPPER AIR DATA
0130010025
HOLLoman

STATION ALTITUDE 4125.59 FEET MSI
13 JAN. 77 0755 HRS MST
ASCENSION NO. 25

WSTN SITE COORDINATES
571739.24 FEET E
352745.21 FEET N

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
79000.0	29.0	-53.2			45.2	577.8	160.7		11.7	1.000010
79500.0	28.3	-53.0			44.8	578.1	160.3		10.7	1.000010
80000.0	27.6	-52.8			43.7	578.4	160.1		9.9	1.000010
80500.0	27.0	-52.5			42.8	578.6	159.8		9.2	1.000009
81000.0	26.4	-52.3			41.5	578.9	156.8		7.9	1.000009
81500.0	25.8	-52.1			40.6	579.2	152.8		6.7	1.000009
82000.0	25.2	-51.9			39.6	579.5	155.1		6.0	1.000009
82500.0	24.6	-51.7			38.7	579.8	168.9		6.5	1.000009
83000.0	24.0	-51.5			37.8	590.0	180.2		7.3	1.000008
83500.0	23.5	-51.3			36.0	590.3	176.6		8.0	1.000007
84000.0	22.9	-51.1			35.0	590.6	166.3		8.8	1.000007
84500.0	22.4	-50.8			35.1	590.9	158.0		9.8	1.000008
85000.0	21.9	-50.6			34.7	591.1	154.1		11.0	1.000008
85500.0	21.4	-50.4			33.5	591.4	154.3		12.1	1.000007
86000.0	20.9	-50.2			32.7	591.7	154.5		13.2	1.000007
86500.0	20.4	-50.0			31.0	592.0	154.5		14.4	1.000007
87000.0	19.9	-49.8			31.1	592.2	154.3		15.8	1.000007
87500.0	19.5	-49.6			30.4	592.5	154.0		17.3	1.000007
88000.0	19.0	-49.4			29.7	592.7				1.000007
88500.0	18.6	-49.2			29.0	593.0				1.000006
89000.0	18.2	-49.0			28.3	593.2				1.000006
89500.0	17.8	-48.9			27.6	593.5				1.000006
90000.0	17.4	-48.7			27.0	593.7				1.000006
90500.0	17.0	-48.5			26.3	593.9				1.000006

STATION ALTITUDE 4126.59 FEET MSI
13 JAN. 77 0755 HRS MST
ASCENSION NO. 25

MANDATORY LEVELS
0130010075
HOLLIDAY
TABLE VIII

WSTM SITE COORDINATES
571739.24 FEET E
362745.21 FEET W

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4854.	.4	.2	99.	11.4	1.2
800.0	6458.	2.6	-9.7	40.	324.0	9.2
750.0	8161.	-1.0	-17.7	36.	309.0	15.5
700.0	9952.	-5.0	-14.5	47.	294.0	20.4
650.0	11849.	-8.7	-26.0	23.	266.3	22.9
600.0	13868.	-13.7	-19.3	60.	246.4	26.4
550.0	16024.	-17.4	-41.6	10.	246.0	26.5
500.0	18344.	-22.2	-45.4	10.	247.4	47.5
450.0	20856.	-28.0	-47.5	13.	235.3	50.6
400.0	23595.	-34.4	-50.0	17.	226.3	55.1
350.0	26631.	-38.7	-50.2	9.***	220.5	48.0
300.0	30068.	-43.0			244.7	39.7
250.0	34031.	-50.4			254.5	39.8
200.0	38767.	-54.6			251.4	58.7
175.0	41593.	-52.1			244.0	71.8
150.0	44886.	-50.7			251.6	91.0
125.0	48750.	-54.4			268.1	63.7
100.0	53351.	-62.5			257.3	42.6
80.0	57772.	-60.7			256.2	40.5
70.0	60410.	-64.8			259.0	33.4
60.0	63537.	-61.9			248.0	25.9
50.0	67246.	-59.9			267.8	20.9
40.0	71876.	-52.7			242.5	15.8
30.0	77940.	-57.5			163.9	10.7
25.0	81803.	-51.8			158.8	6.1
20.0	86570.	-40.8			154.3	15.6

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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STATION ALTITUDE 4051.00 FEET MSL
13 JAN. 77 0815 HRS MST
ASCENSION NO. 16

STATION ALTITUDE DATA
C170030016
JALLEN

WSTM SITE COORDINATES
450491.50 FEET E
464023.05 FEET N

TABLE IX

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM. PERCENT
ALTITUDE MILLIBARS MSL FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		
975.0	4051.0	-1.0	-1.5	96.0
958.9	4571.0	2.0	-1.1	85.0
859.0	4847.2	1.7	-2.1	76.0
821.8	5421.5	2.6	-2.1	66.0
811.8	6037.7	2.0	-4.7	61.0
732.0	8782.9	-2.6	-10.4	59.0
700.0	9930.7	-6.9	-11.3	71.0
680.9	10643.3	-3.2	-12.7	78.0
673.5	10921.3	-9.0	-15.3	60.0
537.4	12315.8	-11.6	-24.9	52.0
562.2	15433.5	-13.8	-32.7	28.0
552.4	15864.8	-18.1	-35.0	21.0
534.7	16694.7	-19.9	-37.5	19.0
500.0	18287.1	-23.4	-39.1	22.0
417.4	22544.0	-33.3	-47.5	22.0
400.0	23524.9	-34.0	-49.3	21.0
393.0	30003.9	-44.0		
250.0	33959.2	-51.1		
225.6	36182.9	-50.8		
213.9	37307.8	-52.5		
200.0	38740.6	-51.7		
150.0	44890.2	-51.5		
121.9	49233.2	-57.8		
100.0	52350.2	-61.4		
74.4	59286.6	-69.4		
70.0	60493.0	-67.2		
63.8	62359.0	-63.1		
53.8	65816.9	-63.7		
50.0	67313.4	-60.2		
40.8	71523.5	-58.1		

U.S. SITE COORDINATES
450491.50 FEET E
464023.05 FEET N

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permit fully legible reproduction

SIGNIFICANT LEVEL DATA
C130030016
JAILCN

STATION ALTITUDE 4091.00 FEET MSL
13 JAN. 77 0915 HRS 1ST
ASCENSION NO. 16

TABLE IX (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
39.4 72257.3	-53.6	
33.7 75816.2	-55.6	
30.0 78025.1	-53.5	
20.0 86709.7	-50.5	
15.8 91704.2	-50.7	

UPPER AIR DATA
 013000Z0016
 JALICN

STATION ALTITUDE 4051.00 FEET MSL
 13 JAN. 77 0815 HRS MST
 ASCENSION NO. 16

WSTM SITE COORDINATES
 450491.50 FEET E
 464023.05 FEET N

TABLE X

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	CEILING CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
4051.0	876.0	-1.0	-1.6	96.0	1118.7	643.4	80.0	2.9	1.000277
4500.0	861.2	1.6	-1.1	92.2	1089.3	646.5	21.8	2.7	1.000271
5000.0	845.1	1.9	-2.3	73.2	1067.0	646.9	747.0	4.8	1.000264
5500.0	829.2	2.5	-7.2	65.4	1045.7	647.5	335.3	7.6	1.000257
6000.0	813.9	2.1	-4.5	61.5	1023.1	646.9	728.3	10.0	1.000251
6500.0	798.5	1.1	-5.6	60.7	1012.4	645.8	722.5	12.2	1.000246
7000.0	783.5	.1	-6.7	50.3	997.1	644.5	313.8	11.6	1.000241
7500.0	768.7	-1.0	-7.7	59.9	982.1	643.3	717.2	10.0	1.000236
8000.0	754.2	-2.0	-8.8	59.6	967.4	642.0	314.0	9.3	1.000232
8500.0	739.9	-3.0	-9.8	59.2	952.0	640.8	310.5	8.9	1.000227
9000.0	725.9	-4.2	-10.5	51.3	938.0	639.3	306.5	9.1	1.000224
9500.0	711.9	-5.7	-10.9	66.5	925.0	637.6	302.7	9.5	1.000220
10000.0	698.2	-7.1	-11.2	71.5	913.1	635.9	297.0	10.2	1.000217
10500.0	684.7	-8.7	-12.1	76.6	900.0	633.9	291.9	11.0	1.000214
11000.0	671.4	-9.1	-15.8	58.4	885.1	633.3	281.8	13.9	1.000207
11500.0	658.2	-10.1	-18.9	48.4	871.0	632.1	275.0	17.1	1.000202
12000.0	645.4	-11.0	-22.4	78.3	857.2	630.9	258.8	21.1	1.000197
12500.0	632.7	-12.0	-25.4	31.8	843.7	629.7	765.9	24.2	1.000192
13000.0	620.1	-13.2	-26.6	31.1	830.6	628.3	265.9	25.4	1.000189
13500.0	607.7	-14.3	-27.9	30.5	817.7	626.9	264.7	25.6	1.000186
14000.0	595.5	-15.5	-29.1	29.8	805.0	625.5	262.9	25.3	1.000182
14500.0	583.7	-16.6	-30.4	29.2	792.5	624.0	256.7	26.8	1.000179
15000.0	572.1	-17.8	-31.6	28.6	780.3	622.6	251.2	28.4	1.000175
15500.0	560.7	-18.7	-33.0	28.9	767.4	621.5	247.6	27.9	1.000173
16000.0	549.4	-18.4	-35.4	20.7	751.1	621.9	245.2	26.8	1.000169
16500.0	538.2	-19.5	-36.9	19.5	739.1	620.5	244.3	24.8	1.000165
17000.0	527.3	-20.6	-37.8	19.6	727.2	619.2	245.5	24.1	1.000163
17500.0	516.5	-21.7	-38.7	20.5	715.4	617.8	247.8	24.1	1.000151
18000.0	505.3	-22.8	-38.8	21.5	703.0	616.5	248.7	24.6	1.000150
18500.0	495.5	-23.9	-39.5	22.0	692.4	615.1	249.5	25.2	1.000155

STATION ALTITUDE 4001.00 FEET MSL
 13 JAN. 77 0015 HRS MST
 ASCENSION NO. 10

UPPER AIR DATA
 0130030016
 JALLEN

WSTIM SITE COORDINATES
 450491.60 FEET E
 464027.05 FEET N

TABLE X (CONT)

GEOMETRIC ALTITUDE MFL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENSIOPADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND M/KNOTS	DIRECTION DEGREES (MFL)	SPEED M/KNOTS	INDEX OF REFRACTION
19000.0	465.1	-25.1	22.0	681.1	612.7	251.2	27.8	1.000152
19500.0	474.9	-26.2	22.0	689.0	612.2	252.3	30.4	1.000153
20000.0	485.0	-27.4	22.0	699.0	610.8	255.7	32.0	1.000148
20500.0	495.2	-28.5	22.0	709.2	609.3	259.1	32.6	1.000145
21000.0	505.7	-29.7	22.0	720.7	607.9	262.5	32.9	1.000143
21500.0	516.3	-30.9	22.0	732.7	606.4	266.8	34.3	1.000140
22000.0	527.1	-32.0	22.0	745.1	605.0	271.2	34.8	1.000138
22500.0	538.2	-33.2	22.0	757.1	603.6	275.7	34.5	1.000136
23000.0	549.2	-34.0	21.5	769.1	602.3	280.0	33.2	1.000133
23500.0	560.4	-34.8	21.0	781.1	601.0	284.5	33.1	1.000131
24000.0	571.6	-35.5	19.5**	793.0	600.6	289.0	32.9	1.000129
24500.0	582.1	-36.2	17.8**	804.1	599.7	293.5	32.8	1.000126
25000.0	592.6	-36.9	16.2**	815.4	598.9	298.0	31.9	1.000122
25500.0	603.4	-37.6	14.6**	826.9	597.9	302.5	30.8	1.000121
26000.0	614.4	-38.3	13.0**	838.1	597.0	307.0	31.5	1.000119
26500.0	625.5	-39.0	11.4**	849.1	596.1	311.5	32.0	1.000116
27000.0	636.8	-39.7	9.7**	860.1	595.2	316.0	34.0	1.000114
27500.0	648.2	-40.4	8.1**	871.0	594.3	320.5	36.4	1.000112
28000.0	659.7	-41.1	6.5**	882.0	593.4	325.0	38.6	1.000110
28500.0	671.1	-41.9	4.9**	893.1	592.5	329.5	40.0	1.000108
29000.0	682.6	-42.6	3.3**	904.0	591.6	334.0	40.4	1.000106
29500.0	694.1	-43.3	1.6**	915.0	590.7	338.5	39.9	1.000104
30000.0	705.6	-44.0	.3**	926.0	589.7	343.0	38.3	1.000102
30500.0	717.1	-44.9		937.0	588.0	347.5	27.0	1.000100
31000.0	728.6	-45.8		948.0	587.4	352.0	26.7	1.000098
31500.0	740.1	-46.7		959.0	586.5	356.5	36.4	1.000096
32000.0	751.6	-47.6		970.0	585.1	361.0	36.4	1.000094
32500.0	763.1	-48.5		981.0	584.0	365.5	37.5	1.000092
33000.0	774.6	-49.4		992.0	582.9	370.0	40.2	1.000091
33500.0	786.1	-50.3		1003.0	581.8	374.5	43.0	1.000089

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STATION ALTITUDE 4051.00 FEET MSL
 13 JAN. 77 0015 HRS MST
 ASCENSION NO. 16

UPPER ATO DATA
 0130000016
 JALLEN

WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

TABLE X (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE	TEMPERATURE AIR	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (TN)	WIND SPEED M/SEC	INDEX OF REFRACTION
34700.0	249.0	-51.1		791.6	560.0	202.7	46.0	1.000087
34800.0	248.0	-51.0		782.0	560.0	258.1	49.6	1.000095
35000.0	246.0	-51.0		777.0	560.7	255.1	49.7	1.000093
35100.0	245.0	-50.9		764.6	560.8	262.0	49.8	1.000081
35200.0	244.0	-50.6		756.0	560.9	264.2	47.2	1.000079
35300.0	243.1	-51.2		748.2	560.0	256.0	45.0	1.000078
35400.0	242.0	-52.0		741.0	579.3	254.4	45.1	1.000076
35500.0	242.0	-52.4		734.0	578.0	252.3	44.8	1.000075
35600.0	207.1	-52.1		720.2	579.2	251.1	45.0	1.000073
35700.0	207.0	-51.3		712.4	579.6	250.0	46.0	1.000071
35800.0	197.6	-51.7		710.8	578.8	240.2	48.0	1.000069
35900.0	192.7	-51.7		702.0	579.0	250.3	51.2	1.000068
40000.0	198.6	-51.7		696.0	579.8	250.7	55.0	1.000066
40500.0	194.0	-51.6		689.7	579.8	251.0	50.0	1.000055
41000.0	176.0	-51.6		687.0	579.8	251.1	64.5	1.000063
41500.0	175.0	-51.5		676.4	579.9	251.2	68.4	1.000052
42000.0	172.7	-51.0		670.0	579.9	251.0	72.9	1.000060
42500.0	167.0	-51.0		663.7	579.9	250.7	79.7	1.000059
43000.0	162.0	-51.6		657.0	579.6	249.8	84.0	1.000057
43500.0	160.1	-51.5		651.0	579.9	249.0	87.4	1.000055
44000.0	150.4	-51.6		645.8	580.0	247.7	86.9	1.000055
44500.0	147.0	-51.0		640.1	580.0	247.1	88.6	1.000053
45000.0	140.0	-51.7		634.7	579.8	246.7	84.5	1.000052
45500.0	145.7	-50.4		626.0	578.9	250.2	86.0	1.000051
46000.0	142.3	-53.1		625.2	577.9	253.6	87.8	1.000050
46500.0	135.0	-51.9		620.7	577.0	257.5	85.7	1.000049
47000.0	135.7	-51.6		616.3	576.0	261.9	82.2	1.000048
47500.0	122.6	-56.2		611.0	573.1	265.0	77.4	1.000047
48000.0	120.4	-56.0		607.5	574.1	267.1	71.2	1.000046
48500.0	126.6	-50.7		603.4	573.2	268.0	67.0	1.000045

UPPER AIR DATA
 Q1300J0016
 JALLEN
 TABLE X (CONT)

STATION ALTITUDE 4051.00 FEET MSL
 13 JAN. 77 0915 HRS MST
 ASCENSION NO. 16

WSTM SITE COORDINATES
 450491.50 FEET E
 464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
49000.0	123.4	-57.4			199.3	572.2	266.4	65.9	1.000044
49500.0	120.5	-58.0			195.1	571.4	264.7	65.0	1.000043
50000.0	117.6	-58.4			190.0	570.9	262.6	64.4	1.000043
50500.0	114.8	-58.9			186.7	570.3	260.1	63.8	1.000042
51000.0	112.1	-59.3			182.6	569.7	255.7	62.6	1.000041
51500.0	109.4	-59.8			178.6	569.1	251.3	61.7	1.000040
52000.0	106.8	-60.2			174.7	568.5	246.9	60.7	1.000039
52500.0	104.2	-60.6			170.8	567.9	242.9	59.9	1.000038
53000.0	101.7	-61.1			167.1	567.3	243.5	58.3	1.000037
53500.0	99.3	-61.6			163.5	566.6	244.0	56.7	1.000036
54000.0	96.8	-62.3			159.9	565.7	245.5	52.4	1.000036
54500.0	94.4	-62.9			156.5	564.8	247.7	47.3	1.000035
55000.0	92.1	-63.6			153.1	563.9	249.9	41.2	1.000034
55500.0	89.8	-64.3			149.9	563.0	251.7	33.4	1.000033
56000.0	87.6	-65.0			146.6	562.1	254.7	25.6	1.000033
56500.0	85.5	-65.5			143.5	561.2	255.0	21.0	1.000032
57000.0	83.4	-66.3			140.4	560.3	257.7	16.8	1.000031
57500.0	81.3	-67.0			137.4	559.4	258.7	14.1	1.000031
58000.0	79.3	-67.7			134.5	558.5	256.8	14.7	1.000030
58500.0	77.4	-68.3			131.6	557.5	255.1	15.3	1.000029
59000.0	75.5	-69.0			128.8	556.6	254.8	16.6	1.000029
59500.0	73.6	-69.0			125.6	556.6	255.0	18.3	1.000028
60000.0	71.8	-68.1			121.0	557.9	255.3	19.4	1.000027
60500.0	70.0	-67.2			118.4	559.1	255.8	19.4	1.000026
61000.0	68.3	-66.1			114.8	560.6	256.2	19.4	1.000026
61500.0	66.5	-65.0			111.4	562.1	256.0	18.7	1.000025
62000.0	64.9	-63.9			108.1	563.6	255.7	18.0	1.000024
62500.0	63.4	-63.1			105.1	564.6	256.4	18.5	1.000023
63000.0	61.8	-63.2			102.6	564.5	257.4	19.3	1.000023
63500.0	60.3	-63.7			100.1	564.4	257.2	19.7	1.000022

STATION ALTITUDE 4051.00 FEET MSL
 13 JAN. 77 0815 HRS MST
 ASCENSION NO. 16

UPPER AIR DATA
 C130030016
 JALLEN

WSTM SYIC COORDINATES
 450451.60 FEET E
 464023.05 FEET N

TABLE X (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			METERS	KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	
64000.0	56.8	-63.4			97.7	564.2		255.8	19.8	1.000022
64500.0	57.4	-63.5			95.4	564.1		254.5	19.9	1.000021
65000.0	58.0	-63.6			93.1	564.0		254.0	18.4	1.000021
65500.0	54.5	-63.6			90.9	563.9		253.5	16.9	1.000020
66000.0	53.3	-63.3			88.5	564.4		254.7	16.1	1.000020
66500.0	52.0	-62.1			85.9	566.0		257.4	15.8	1.000019
67000.0	50.8	-60.9			83.3	567.5		259.8	15.9	1.000019
67500.0	49.6	-60.1			81.0	568.6		259.8	19.0	1.000018
68000.0	48.4	-59.9			79.0	569.0		259.8	22.1	1.000018
68500.0	47.2	-59.6			77.0	569.3		260.8	24.8	1.000017
69000.0	46.1	-59.4			75.1	569.6		262.2	27.3	1.000017
69500.0	45.0	-59.1			73.2	570.0		263.4	29.9	1.000016
70000.0	43.9	-58.9			71.4	570.3		264.0	26.7	1.000016
70500.0	42.9	-58.6			69.8	570.6		264.7	22.8	1.000015
71000.0	41.8	-58.4			67.9	571.0		263.3	18.8	1.000015
71500.0	40.8	-58.1			66.2	571.3		250.3	14.5	1.000015
72000.0	39.9	-55.2			63.7	575.2		220.7	11.4	1.000014
72500.0	39.0	-53.7			61.8	577.1		208.8	10.4	1.000014
73000.0	38.0	-54.0			60.5	576.7		194.9	10.1	1.000013
73500.0	37.2	-54.3			59.1	575.3		190.9	10.4	1.000013
74000.0	36.3	-54.6			57.0	576.0		181.2	9.4	1.000013
74500.0	35.4	-54.9			56.6	575.6		185.2	8.1	1.000013
75000.0	34.6	-55.1			55.3	575.2		190.6	6.9	1.000012
75500.0	33.8	-55.4			54.1	574.6		200.5	7.8	1.000012
76000.0	33.0	-55.4			52.8	574.8		208.2	9.1	1.000012
76500.0	32.2	-54.9			51.5	575.5		213.8	10.4	1.000011
77000.0	31.5	-54.5			50.2	576.1		210.6	10.1	1.000011
77500.0	30.8	-54.0			48.9	576.7		207.1	9.9	1.000011
78000.0	30.0	-53.5			47.6	577.3		203.8	9.7	1.000011
78500.0	29.3	-53.3			46.5	577.6		204.3	9.7	1.000010

UPPER AIR DATA
0130030016
JALLEN
TABLE X (CONT)

STATION ALTITUDE 4051.00 FEET MSL
13 JAN. 77 0915 HRS MST
ASCENSION NO. 16

WSM SITE COORDINATES
450491.50 FEET E
464023.05 FEET N

GEOMETRIC ALTITUDE -51 FEET	PRESSURE MILLIBARS	TEMPERATURE 410 DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
73000.0	28.7	-53.0	45.4	577.8	204.7	9.3	1.000010	
75000.0	28.0	-53.0	44.3	578.0	204.0	9.6	1.000010	
80000.0	27.4	-52.8	43.3	578.3	195.9	8.1	1.000010	
85000.0	26.7	-52.0	42.2	578.5	184.3	6.8	1.000009	
91000.0	26.1	-51.5	41.2	578.7	167.6	6.0	1.000009	
91500.0	25.8	-50.9	40.0	579.0	147.0	6.4	1.000008	
92000.0	24.9	-50.1	39.3	579.2	131.7	7.4	1.000009	
92500.0	24.3	-50.0	38.3	579.4	120.6	9.1	1.000009	
93000.0	23.8	-51.0	37.4	579.6	113.9	11.5	1.000008	
93500.0	23.2	-51.6	26.5	579.9	100.6	14.0	1.000008	
94000.0	22.7	-51.4	35.7	580.1	106.7	16.6	1.000008	
94500.0	22.2	-51.3	34.0	580.3	112.4	15.1	1.000008	
95000.0	21.7	-51.1	34.0	580.5	119.9	13.7	1.000008	
95500.0	21.2	-50.9	33.2	580.8	129.0	12.5	1.000007	
96000.0	20.7	-50.7	32.4	581.0	139.0	12.3	1.000007	
96500.0	20.2	-50.6	31.6	581.2	148.7	12.7	1.000007	
97000.0	19.7	-50.5	30.0	581.3	157.6	13.4	1.000007	
97500.0	19.2	-50.5	30.2	581.3	156.7	14.2	1.000007	
98000.0	18.8	-50.6	29.5	581.2	147.6	15.6	1.000007	
98500.0	18.0	-50.6	28.8	581.2	140.1	17.2	1.000006	
99000.0	17.6	-50.6	28.2	581.2			1.000006	
99500.0	17.2	-50.6	27.3	581.2			1.000006	
99500.0	16.8	-50.6	26.9	581.1			1.000006	
99500.0	16.3	-50.6	26.3	581.1			1.000006	
99500.0	16.4	-50.7	25.7	581.1			1.000006	
99500.0	16.0	-50.7	25.1	581.1			1.000006	

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STATION ALTITUDE 4081.00 FEET MSL
 17 JUN. 77 0015 HRS MST
 ASSOCIATION NO. 35

MANDATORY LEVELS
 C13C030C16
 JALLEN
 TABLE XI

USM SITE COORDINATES
 460491.50 FEET E
 464023.05 FEET N

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PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
950.0	4846.	1.7	-2.1	76.	353.6	4.1
900.0	5457.	1.7	-5.5	61.	322.9	12.0
750.0	6146.	-2.7	-9.1	59.	317.0	9.1
700.0	6671.	-6.9	-11.3	71.	297.8	10.1
650.0	7183.	-13.7	-21.1	42.	270.7	19.6
600.0	7687.	-15.1	-28.7	30.	263.5	25.4
550.0	8195.	-18.7	-35.3	21.	245.2	26.9
500.0	8768.	-23.4	-39.1	22.	245.2	24.9
450.0	9268.	-29.2	-44.0	22.	257.7	13.8
400.0	9745.	-34.8	-46.7	21.	260.8	33.1
350.0	10206.	-39.1	-50.0	11.**	272.7	32.2
300.0	10657.	-44.0			290.6	29.3
250.0	11010.	-51.1			264.2	45.1
200.0	11364.	-51.7			250.1	47.2
175.0	11509.	-51.6			251.2	69.0
150.0	11788.	-51.6			246.7	84.6
125.0	12024.	-57.0			261.3	56.5
100.0	12208.	-61.4			243.8	57.2
80.0	12489.	-67.8			257.4	14.5
70.0	12632.	-67.7			255.9	19.4
60.0	12745.	-63.7			256.9	19.8
50.0	12829.	-60.2			255.9	17.8
40.0	12897.	-55.6			237.8	11.7
30.0	12975.	-53.5			203.8	9.7
25.0	13095.	-52.2			134.3	7.3
20.0	13262.	-50.5			152.4	12.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.